

Motor Carrier Management and Threat Assessment Study

Scope of Work

June 2003

Introduction

Motor Carrier Issues

The difficulties surrounding truck traffic and deliveries have plagued the District for many years. A variety of organizations and agencies have addressed these issues over the years, but there has never been a comprehensive strategy for managing truck traffic and deliveries that focused initially on a comprehensive understanding of the scope of the problem. Washington, DC, as the core of a large metropolitan region relies on the deliveries of goods by truck to sustain businesses, institutions and households. Yet, truck traffic and deliveries must be managed so as to minimize adverse impacts on public safety, air pollution, congestion, and roadway maintenance. In addition truck movement and truck management must be better managed and understood in light of increased concerns about security. Finally, the District must ensure that federal and local truck management and safety requirements are addressed through a comprehensive truck management program within the District government

Due to the large number of trucks that travel within the District, the surge in construction activity and recent terrorism incidents, truck traffic and deliveries have become matters of concern to the Federal and District Governments, private businesses and neighborhoods alike. Idling trucks exacerbate the current air pollution problem in the city and their parking or standing in curb lanes and travel lanes can block through traffic. Trucks traversing neighborhood streets place wear and tear on road surfaces and subject city residents to noise and additional air pollution. Some District streets, due to their physical composition or geometry, are inappropriate for heavy truck traffic.

The lack of a comprehensive truck traffic and delivery management plan fosters road surface deterioration and traffic congestion that impairs public safety and the viability of businesses relying on trucks for deliveries. Additionally, congestion adds substantial costs to delivery services as well. Inadequate loading zones and staging areas exacerbates these conditions. Finally, and most importantly, unregulated truck traffic can pose a security risk to national landmarks, federal facilities and local residents.

Background

The main purpose of the study is to develop a comprehensive understanding of motor carrier operations and the threats and problems inherent in those operations, and develop a strategic plan that outlines operational and facility solutions to those problems that will benefit residents, business owners, and District and federal governments alike.

The focus of the study is on all Vehicle Class 3 trucks or larger, or trucks with a gross vehicle weight greater than 10,000 pounds travelling through or making deliveries to locations within the District, with solutions developed to accommodate the largest

vehicles being used. This study also includes a task for mapping existing street restrictions and prohibitions for motor carrier bus traffic and developing a comprehensive motor carrier safety management program within the District government.

The study will be coordinated by a Technical Advisory Group, consisting of representatives from the DC Department of Transportation (DDOT), the DC Office of Planning, the Metropolitan Police Department, DC Department of Consumer and Regulatory Affairs, US Capitol Police Department, Federal Highway Administration, Federal Motor Carrier Safety Administration, motor carrier interests, business interests and community groups.

This initiative requires the consultant to accomplish ten (10) separate work tasks. The goal of the first five tasks is to present a clear picture of the motor carrier operations in Washington, DC. Task 6 is a series of public meetings. The goal of the tasks 7 through 9 is to develop, analyze and recommend strategies for managing motor carrier operations in the District, and mitigating the adverse impacts of motor carrier operations on the District, while maximizing the safety and efficiency of their operations. Task 10 provides for the preparation of a Final Report.

The first five tasks may be carried out concurrently. Once the results of those tasks have been presented to and approved by the Technical Advisory Group, the Consultant shall begin work on Task 7, to be followed by Tasks 8 and 9. After each task is completed, the Consultant shall provide the members of the Technical Advisory Group editable draft reports in electronic format. Acceptable electronic formats are as follows: the most recent versions of Microsoft Word, Excel, Adobe Illustrator, and PageMaker. Map products shall be delivered in Arcview version 3.2 shapefile format and coordinated the District's GIS mapping program. After the Technical Advisory Group has reviewed the draft deliverable for each Task, the Consultant shall incorporate the Technical Advisory Group's comments into the final version of each Task deliverable. Following the completion of all nine Tasks, the Consultant shall provide a Final Report in both printed and electronic versions. The electronic version of the final Report shall be provided on a reproducible compact disk.

Tasks

Task 1: Work Plan and Public Participation Plan

The consultant shall prepare a work plan spelling out how they plan to complete the various tasks outlined in this scope of work. The work plan shall include a detailed study staffing plan, study budget estimate and public participation plan, indicating how the study will be coordinated with the Technical Advisory Group, business groups and community groups. The work plan shall also include a study schedule, consistent with the various deadlines for deliverables outlined below and provide for monthly status reports and invoices. The public participation section of the work plan shall describe those methods the Consultant proposes to use to communicate the purpose, findings and recommendations with the Technical Advisory Group and other stakeholders throughout the study effort, including written and electronic methods. *Meet and DDOT, esp. TSA. Coordinate with Bus Study. ANC as stakeholder . . . ANC or regional meetings.*

Ten copies of the work plan with proposed budget and schedule shall be provided to the project manager **within 2 weeks** of the project start date. The Consultant and DDOT shall also conduct a meeting of the Technical Advisory Group to present the proposed work plan and obtain their comments on the proposed work plan **within 4 weeks** of the project start date. A general public meeting will also be held to announce the beginning of the study and obtain comments from the business, motor carrier and residential community **within 4 weeks** of the project start date.

Task 2: Market Demand Analysis

The Consultant shall prepare a market demand analysis, including the following components using existing data:

- a. The number of trucks that enter or operate in the District of Columbia. This shall include an average weekday total, seasonal variations, peak month, peak day(s), peak hours and day of the week trends. The trends and peak demands shall be shown in graphs.
- b. The average length and weight of the vehicles identified in “(a)” above.
- c. Origin of the trucks identified in part (a), their destinations, their travel patterns within the city, and their routes in and out of the city. As well as being described in a narrative, the travel patterns and destinations visited shall be mapped.
- d. Typical number of daily deliveries within the District: average time, median time, minimum and maximum lengths of time to complete typical deliveries.
- e. List and location (map) of staging or transfer facilities, including any overnight truck storage locations in the metropolitan region.
- f. List and location (map) of District streets presently restricting or prohibiting motor carriers by regulation. Street restrictions and prohibitions should be displayed to distinguish between different types of restrictions (“no turns,” “no through traffic,” etc.) and the different types of vehicles restricted (light trucks, heavy trucks, etc.). Light trucks are trucks with gross vehicle weight of less than 10,000 pounds and heavy trucks as trucks with a gross vehicle weight of 10,000 pounds or greater.

- g. List and location (map) of motor carrier service locations (fuel / mechanical) within the District.
- h. List and location of weight-in-motion stations and safety inspection stations.
- i. Breakdown of current truck traffic volumes on a route basis. A depiction of the relative density of daily delivery activities on heavily impacted streets.
- j. Estimate of future demand for truck traffic and delivery activity to be generated by new or upcoming development, including the new convention center.
- k. Loss of transfer facilities or off-street loading due to new or future development.
- l. Number and percentage of traffic accidents involving trucks compared with the number and percentage of all vehicles comprised by trucks.

Consultant is encouraged to use data from previous studies and existing reports. Any cost savings resulting from use of available data should be reflected in the cost estimate.

Deliverables:

The deliverable for this task will be a written description of the findings resulting from investigations conducted under Task 2, which shall be a section of the overall Final Report. The Consultant in developing final recommendations/solutions for the Final Report will use findings from Task 2. The Consultant shall provide to the Technical Advisory Group an editable version of the draft section in electronic format **by the end of week 15**. Acceptable electronic formats are listed above. In addition to a narrative, the data shall be presented in tables and graphs, allowing many possible cross-tabulations. After incorporating changes suggested by the Technical Advisory Group, the Consultant shall resubmit the draft to the Technical Advisory Group for their approval.

Task 3: Best Practices Report

The Consultant shall conduct a study of the best practices of regulating and managing motor carrier routes and deliveries, including the following recommended cities and any other cities identified by the Consultant as relevant to the District of Columbia:

- San Francisco, CA
- Philadelphia, PA
- New York, NY
- Boston, MA
- Baltimore, MD
- Salt Lake City, UT
- Atlanta, GA
- Examples from other countries

Any additional cities recommended by the Consultant shall have the prior approval of DDOT before research is conducted.

The Consultant shall examine the previously listed cities for their management techniques and facilities, including (but not limited to):

1. Motor carrier regulatory programs to ensure motor carrier compliance with federal and local motor carrier safety requirements.

2. Availability of wayfinding and regulatory information via roadway signage or via the internet. What accommodation, if any, is made for street closures due to special events that are scheduled in advance;
3. Timing and/or routing coordination (to minimize conflicts), including any means of shifting deliveries to off-peak times (seasonal & time-of-day);
4. Designated truck routes;
5. Policies for determining the routing of construction vehicles in areas that are typically restricted to heavy trucks;
6. Designated motor carrier evacuation routes;
7. Costs/fees imposed by city or charged by private operators for facilities, management services and street maintenance;
8. Inspection, mechanical services and driver amenities provided;
9. Techniques for restricting trucks to designated routes and limiting their presence in historic districts, high security districts and residential neighborhoods;
10. ITS opportunities related to commercial vehicle operations (CVO) regarding cost effective information systems, communication networks and technology that support Motor Carrier Safety, including CVISN.
11. Levels of subsidy and/or fines used to ensure utilization of designated facilities and compliance with regulations;
12. Regulations against idling;
13. Management of convention center deliveries and traffic;
14. Techniques for conducting security inspection of trucks, sealing them and controlling their routing to high security districts within the city; and
15. Motor carrier regulatory and enforcement programs.

Deliverables:

The deliverable for this task will be a written narrative of the findings of the research carried out under Task 3, which shall be a section of the overall Final Report. The deliverable for this task will be a report, using charts, graphs and maps as necessary, of the required information collected by studying the above cities for best practices. The Consultant in developing final recommendations/solutions for the Final Report will use findings from Task 3. The Consultant shall provide to the Technical Advisory Group an editable version of the draft section in electronic format by the **end of week 18**.

Acceptable electronic formats are listed above. After incorporating changes suggested by the Technical Advisory Group, the Consultant shall resubmit the draft to the Technical Advisory Group for approval.

Task 4: Industry Focus Groups/Interviews

The Consultant shall conduct focus groups and/or interviews with at least ten (10) industry stakeholders, including but not limited to the industry representatives listed below. The goal of the focus groups and interviews will be to determine needs and issues

that might affect the design of motor carrier management initiatives. These might include:

- Special needs of trucks (such as turning radii, roadbed support),
- Time constraints for deliveries,
- Amenities for drivers,
- Special needs for different types of deliveries (food, convention, hazardous materials, deliveries to security-sensitive locations other).

Industry stakeholders to be interviewed:

1. US Postal Service
2. Major Grocery Store Chains
3. Waste Haulers
4. Overnight Delivery Service
5. Food and Beverage Delivery Services
6. Construction Services
7. Motor Coach Industry
8. Other motor carrier operators recommended by the Consultants and approved by DDOT.

Task 5: Stakeholder Focus Groups/Interviews

The Consultant shall conduct focus groups and/or interviews with at least fifteen (15) other stakeholders, including but not limited to:

- The National Park Service and National Park Service Police,
- The District Department of Transportation,
- The National Capital Planning Commission,
- The Architect of the Capitol and US Capitol Police,
- Metropolitan Police Department,
- Federal Protective Services,
- Secret Service,
- The Smithsonian Institution,
- General Services Administration,
- Union Station,
- The Washington Convention Center Authority,
- Metropolitan Washington Board of Trade,
- DC Chamber of Commerce,
- ANC and Community Groups (3 meetings)
- Other Stakeholder groups recommended by the Consultant and approved by DDOT.

The goal of the focus groups and interviews will be to determine any interests or concerns that might affect the design of truck traffic and delivery management solutions.

The consultant shall also conduct three focus group meetings with Advisory Neighborhood Commissions, neighborhood groups and citizens to obtain their comments on the impact of trucks on traffic congestion, safety, vibration, noise and other issues.

Deliverables:

The deliverable for Tasks 4 and 5 will be a written narrative of the findings of Tasks 4 and 5, which shall be one section of the overall Final Report. The Consultant, in preparing final recommendations and solutions, will use findings from the focus groups/interviews. The Consultant shall provide to the technical working group an editable version of the draft sections in electronic format **by the end of week 12**.

Acceptable electronic formats are listed above. After incorporating changes suggested by the technical working group, the Consultant shall resubmit the drafts to the technical working group for their approval.

Task 6: Public Meetings

The Consultant and DDOT shall conduct a meeting of the Technical Advisory Group **by the end of week 18** to present the findings of tasks 2, 3, 4 and 5 and obtain comments from the Group. The Consultant shall be responsible for developing a summary of the findings of tasks 2, 3, and 4 for distribution to the Technical Advisory Group prior to the meeting. The Consultant shall also be responsible for developing maps, graphics and other display materials to assist in conducting the Technical Advisory Group meeting.

The Consultant and DDOT shall conduct a series of 3 public meetings **by the end of week 20** to present the findings of Tasks 2, 3, 4 and 5 to various stakeholder and community groups and the general public, and obtain comments from these groups. The Consultant shall utilize the summary findings document and maps and graphics materials developed for the Technical Advisory Group meeting at the public meeting.

The Consultant shall modify the reports generated under Tasks 2, 3, 4 and 5 based upon comments received from the Technical Advisory Group meeting and the public meeting.

Task 7: Recommendation Matrix and Site Analysis

Using the baseline information developed in Tasks 1 through 5, the Consultant shall develop a matrix of possible truck management and security recommendations. While some of the recommendations may involve creating staging, transfer or inspection facilities, the Consultant is encouraged to look broadly at possible recommendations, including management, pricing, enforcement, and facility-sharing strategies. The Consultant may first want to analyze comprehensive solutions before identifying facility sites. For this task, the Consultant shall coordinate closely with DDOT.

The Consultant shall evaluate each possible solution (including any new facilities recommended) or mix of solutions against the following list of criteria:

- Ensure compliance with federal and local motor carrier safety and management requirements;
- Reduction in traffic congestion caused by parked or standing trucks;
- Reduction in truck idling, cruising and emitted air pollution;
- Reduction in vibration and other damage to roadways;
- Feasibility from the perspective of:

Businesses receiving a delivery or pick-up

Business making a delivery or pick-up

Truck drivers

District and Federal officials responsible regulation and enforcement;

- Increased Safety (truck drivers, pedestrians, other drivers);
- Security (threats of crime and terrorism);
- Impacts on adjacent properties;
- Encouragement or support of additional economic development in the city;
- Supporting convention operations in the District; and
- Other criteria recommended by the consultants and approved by DDOT.

In addition to the above criteria, the Site Analysis shall include for each motor carrier safety management site analyzed/recommended:

1. Graphics depicting potential locations, and required travel routes for each motor carrier management facility location. Maps shall be produced in the formats required above;
2. Conceptual level facility designs;
3. Any special construction requirements and their costs;
4. Type and cost of driver amenities to be provided;
5. Access to/from major city gateways;
6. Opportunities for secure daytime and overnight operations;
7. Utilization fees necessary to recoup capital and operating costs without subsidy;
8. Likelihood of facility utilization based on industry operating characteristics if facility utilization is not mandatory or subsidized; and
9. Potential adverse impacts on neighborhood residents and businesses

The Consultant shall prepare a map proposing recommended truck routes for through truck traffic, as well as proposed truck routes for providing service to major commercial, employment, industrial centers and public facilities within the District of Columbia. These proposed truck routes shall be designed to facilitate the safe and efficient delivery of goods while minimizing truck impacts on residential neighborhoods.

Deliverables:

The deliverable for this Task will be a written narrative describing the recommendations prepared under Task 7, which shall be a section of the overall Final Report. The Consultant shall prepare a matrix of recommendations and site analysis along with a narrative explaining the matrix and any additional considerations that cannot be explained in matrix form. Possible motor carrier management facility sites shall be shown on maps. The Consultant shall also provide a map depicting proposed truck through routes and local travel routes. The Consultant shall provide to the Technical Advisory Group an editable version of the draft section in electronic format **by the end of week 30**. Acceptable electronic formats are listed above. The Consultant and DDOT shall conduct a meeting with the Technical Advisory Group to review the recommendations of the Task 7 report and obtain comments. After incorporating changes suggested by the Technical Advisory Group, the Consultant shall resubmit the draft to the Technical Advisory Group for their approval. Once the matrix of recommendations, and maps have been developed,

the Consultant shall work with the Technical Advisory Group to develop a list of preferred solutions for further analysis in Task 9.

TASK 8: Public Meeting

The Consultant and DDOT shall conduct a meeting of the Technical Advisory Group **by the end of week 30** to present the findings of task 7 and obtain comments from the Group. The Consultant shall be responsible for developing a summary of the findings of task 7 for distribution to the Technical Advisory Group prior to the meeting. The Consultant shall also be responsible for developing maps, graphics and other display materials to assist in conducting the Technical Advisory Group meeting.

The Consultant and DDOT shall conduct a series of 3 public meetings **by the end of week 32** to present the findings of Task 7 to various stakeholder and community groups and the general public, and obtain comments from these groups. The Consultant shall utilize the summary findings document and maps and graphics materials developed for the Technical Advisory Group meeting at the public meeting.

The Consultant shall modify the reports generated under Task 7 based upon comments received from the Technical Advisory Group meeting and the public meeting.

Task 8: Financial Analysis

The Consultant shall prepare a financial analysis of the preferred solutions identified in Task 7, based on the matrix, Motor Carrier Management Program description and Technical Advisory Group input, including revenue sources and estimates, capital costs (including debt servicing), operating costs, and cost recovery possibilities, if any. As part of this analysis, the Consultant shall identify possible funding sources for recommended Motor Carrier Management Program elements. Where applicable, the Consultant shall show linkages between the costs and benefits of the truck management program to the individuals and entities that will fund it. The analysis shall show the costs for all preferred solutions; no solutions shall be rejected because of costs at this stage.

Deliverables:

The deliverable for this task will be a written description of the financial analysis conducted in Task 8, which shall be a section of the overall Final Report. The Consultant shall provide to the Technical Advisory Group an editable version of the draft section in electronic format **by the end of week 35**. Acceptable electronic formats are listed above. After incorporating changes suggested by the Technical Advisory Group, the Consultant shall resubmit the draft to the Technical Advisory Group for their approval.

Task 9: Motor Carrier Management Program

The Consultant shall prepare a draft comprehensive Motor Carrier Management Program description for truck traffic and delivery operations in the District. The Motor Carrier Management Program shall describe proposed policies regarding the management of motor carriers to ensure compliance with Federal and District motor carrier safety regulations, provide

a comprehensive description of programs and policies to reduce potential terrorist threats involving motor carriers, provide loading and unloading regulations and policies which provide for the efficient movement of goods while preserving traffic flow and protecting residential communities from excessive truck traffic.

This plan shall be a complete guide for the city and other partner agencies on implementing the mix of preferred solutions and supporting their continued success. This program description shall:

1. Identify the best mean(s) of and responsibility for providing information to truck drivers.
2. Identify preferred truck travel and delivery routes.
3. Identify the best mean(s) of and responsibility for operating truck management facilities and funding the facility operations.
4. Identify the best means of and responsibility for managing and regulating motor carrier operations in the District.
5. Identify necessary threat identification, control and enforcement measures and responsibilities, including which agency(ies) should be responsible for enforcement. This may include suggested new laws or revisions to existing laws.
6. Identify innovative technologies that could be used to manage motor carrier activities.
7. Identify the best means of and responsibility for ongoing evaluation of the motor carrier management program and implementation of improvements.

In this plan, the Consultant shall also recommend means for coordination among the 13 separate law enforcement agencies (and the District Department of Transportation) that interact with motor carriers buses in the District.

Deliverables:

The deliverable for this task shall be a draft comprehensive Motor Carrier Management Program description for the city and other partner entities to implement. The deliverable for this task will be a section of the overall final report. The Consultant shall provide to the Technical Advisory Group an editable version of the draft section in electronic format **by the end of week 37** for review and comment. Acceptable electronic formats are listed above.

The Consultant and DDOT shall conduct a meeting of the Technical Advisory Group and a separate public meeting for stakeholders and community groups **by the end of week 40** to present the findings of Tasks 7, 8 and 9, and obtain comments from the Technical Advisory Group and stakeholder and community groups.

Task 10: Final Report

After incorporating changes suggested by the Technical Advisory Group and stakeholder and community groups, the Consultant shall resubmit the Final Report to the Technical Advisory Group for their approval **by the end of week 45**. The Final Report shall include all findings and recommendations resulting from Tasks 2 through 9, and shall incorporate all previously generated deliverable reports. The Consultant shall provide 50

printed copies and an electronic version of the Final Report for review and approval by the Technical Advisory Group. Acceptable electronic formats are as follows: the most recent versions of Microsoft Word, Excel, Adobe Illustrator, PageMaker and Arcview version 3.2 shapefile format. The final report shall also be provided on a reproducible CD in the formats listed above.

The Consultant and DDOT shall conduct a meeting of the Technical Advisory Group and a separate public meeting for stakeholders and community groups **by the end of week 45** to present the findings of Tasks 10.

Meetings

The Consultant team shall attend nine (9)-scheduled meetings (in addition to the Focus Groups/Interviews), including, but not limited to:

1. An initial scoping meeting with the Technical Advisory Group and stakeholder and community groups (2 meetings)
2. Progress meeting with the Technical Advisory Group following completion of Tasks 2, through 5. (1 meeting)
3. A public meeting with stakeholder and community groups on Tasks 2 through 5. (1 meeting)
4. Progress meeting with the Technical Advisory Group following completion of Task 7. (1 meeting)
5. Progress meeting with the Technical Advisory Group following completion of Tasks 8 and 9. (1 meeting)
6. A public meeting with stakeholder and community groups on Tasks 7 through 9. (1 meeting)
7. A final presentation meeting to the Technical Advisory Group and final presentation meeting for the stakeholder and community groups. (2 meetings)

The Consultant shall also attend monthly progress meetings the DDOT project manager to review progress to date and resolve any issues that may affect completion of the study. The Consultant will be available on an as needed basis to the Contracting Officer's Technical Representative (COTR) to discuss issues raised by the Technical Advisory Group.

Deliverables

- Work Plan with Public Participation Plan, Budget and Project Schedule
- Market Demand Report
- Best Practices Report
- Focus Groups Report
- Recommendations Matrix
- Draft Motor Carrier Management Program Report
- Final Report
- Monthly Progress Reports and Invoices